



SAFETY DATA SHEET

Reference No..... : WTX22X02020562B
Applicant..... : GZ Hao Yin Electronics Co. Ltd
Address..... : 301-B17, 3rd Floor, 123 Dongjiao South Road, Liwan District, Guangzhou
Manufacturer..... : GZ Hao Yin Electronics Co. Ltd
Address..... : 301-B17, 3rd Floor, 123 Dongjiao South Road, Liwan District, Guangzhou
Sample's name..... : Li-on Battery Power pack
Date of Issue..... : 2022-03-11
Test Report Form No..... : WBB-SDS-02A

WALTEK

Prepared By:

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Emma Wang

Compiled by

[Signature]

Approved by



Safety Data Sheet

Section 1- Identification of the Substance/Preparation and of the Company/Undertaking

| | |
|-----------------------------|--|
| Product Name: | Li-on Battery Power pack |
| Model No.: | LR6 |
| Ratings | 1.5V, 2100mAh, 3.15Wh |
| Dimension | Φ50.4mm×14.0mm |
| Weight: | Approx.23.0g |
| Manufacturer: | GZ Hao Yin Electronics Co. Ltd |
| Address: | 301-B17, 3rd Floor, 123 Dongjiao South Road, Liwan District, Guangzhou |
| Emergency Telephone: | 020-81983218 |
| Fax: | 020-81983218 |
| Email: | 2281228544@qq.com |

Section 2-Hazards Identification

| | |
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| Classification | This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29CFR 1910.1200) this product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery. |
|-----------------------|--|

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| Skin corrosion/irritation | See section 8 for exposure controls In the event that this battery has been ruptured, the electrolyte solution contained within the battery would be corrosive and can cause burns |
| Serious eye damage/eye irritation | The steam of the electrolyte may stimulate eyes. Especially, substance that may cause inflammation of the eyes is contained |
| Skin sensitization | The leakage of the electrolyte may cause sore and stimulation on the skin |
| Carcinogenicity | Inhalation of materials from a sealed battery is not an expected route of exposure. Vapors or mists from a ruptured battery may cause respiratory irritation |
| Specific target organ toxicity (repeated) | Swallowing is not anticipated due to the battery size. The ingestion of the electrolyte causes tissue damage to throat |

GHS Label elements, including precautionary statements

Emergency Overview

Signal word: Danger
Hazard Statements
 Causes skin irritation
 Causes serious eye irritation
 May cause an allergic skin reaction
 May cause cancer



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold.

Intended use of the product should not result in exposure to the chemical substance This is a battery. In case of rupture: the above hazards exist.

Appearance: Various

Physical State: Solid

Odor: No odor

| | |
|---|------------|
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 1 |
| Specific target organ toxicity (repeated exposure) Category | Category 1 |
| Flammable liquid and vapor | Category 3 |

| | |
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| Precautionary Statements - Prevention | <p>Obtain special instructions before use</p> <p>Do not handle until all safety precautions have been read and understood Use personal protective equipment as required</p> <p>Wash face, hands and any exposed skin thoroughly after handling Contaminated work clothing should not be allowed out of the workplace Wear protective gloves</p> <p>Do not breathe dust/fume/gas/mist/vapors/spray</p> <p>Do not eat, drink or smoke when using this product</p> |
| Precautionary Statements - Response | <p>IF exposed or concerned: Get medical advice/attention</p> <p>Specific treatment (see supplemental first aid instructions on this label)</p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention</p> <p>IF ON SKIN: Wash with plenty of soap and water</p> <p>Take off contaminated clothing and wash before reuse</p> <p>If skin irritation or rash occurs: Get medical advice/attention</p> |
| Precautionary Statements - Storage | Store locked |
| Precautionary | Dispose of contents/container to an approved waste disposal plant |



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| Statements - Disposal | |
| Hazards not otherwise classified (HNOC) | Not applicable |
| Unknown Toxicity Other | 31.6% of the mixture consists of ingredient(s) of unknown toxicity |
| Other information | May be harmful if swallowed. Very toxic to aquatic life with long lasting effects. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons |
| Interactions with Other Chemicals | No information available. |

Section 3 – Composition/information on Ingredient

Pure Admixture

| Chemical Name | CAS Number | Weight-% | Trade Secret |
|--------------------------------|------------|----------|--------------|
| Lithium Cobalt Oxide | 12190-79-3 | 41.95 | --- |
| Graphite | 7782-42-5 | 19.16 | --- |
| Copper Foil | 7440-50-8 | 9.75 | --- |
| Aluminium Foil | 7429-90-5 | 5.5 | --- |
| Phosphate(1-),hexafluoro-, | 21324-40-3 | 7.05 | --- |
| Styrene-Butadiene polymer | 9003-55-8 | 0.93 | --- |
| 1,1-Difluoroethylene polymer | 24937-79-9 | 0.65 | --- |
| Sodium carboxymethyl cellulose | 9004-32-4 | 0.31 | --- |
| Ethylene Carbonate | 96-49-1 | 7.05 | --- |
| Dimethyl Carbonate | 616-38-6 | 7.05 | --- |
| Ci 77266 | 1333-86-4 | 0.60 | --- |

* The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4 – First Aid Measure

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| General Advice | <p>First aid is upon rupture of sealed battery.</p> <p>Eye contact: If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.</p> <p>Skin contact: Wash off immediately with soap and plenty of water for at least 15 minutes. In the case of skin irritation or allergic reactions see a physician. May cause an allergic skin reaction.</p> <p>Inhalation: Remove to fresh air. If symptoms persist, call a physician. Get medical attention immediately if symptoms occur.</p> <p>Ingestion: Do NOT induce vomiting. Rinse mouth immediately and drink plenty of</p> |
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| | <p>water. Never give anything by mouth to an unconscious person. Call a physician.</p> <p>Self-protection of the first aider: Avoid contact with skin, eyes or clothing.</p> <p>Use personal protective equipment as required. Wear personal protective clothing (see section 8).</p> |
| Most important symptoms and effects, both acute and delayed | <p>Most important symptoms and effects: Itching. Coughing and/ or wheezing.</p> |

Section 5 – Fire Fighting measures

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| Suitable extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing Media | CAUTION: Use of water spray when fighting fire may be inefficient. |
| Specific Hazards arising from the chemical | Product is or contains a sensitizer. May cause sensitization by skin contact. |
| Hazardous Combustion Products | Carbon |
| Explosion Data | <p>Sensitivity to Mechanical Impact: No.</p> <p>Sensitivity to Static Discharge: No.</p> |
| Protective Equipment and precautions for firefighters | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. |

Section 6 – Accidental Release Measures

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| Personal Precautions, protective equipment, and emergency procedures | <p>Personal Precautions: Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.</p> <p>Other Information: Refer to protective measures listed in Sections 7 and 8.</p> |
| Environmental Precautions | Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. |
| Methods and material for containment and cleaning up | <p>Methods for Containment: Prevent further leakage or spillage if safe to do so.</p> <p>Methods for cleaning up: Pick up and transfer to properly labeled containers.</p> |

Section 7 – Handling and storage

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|--------------------------------------|--|
| Precautions for safe handling | <p>Handling: In case of rupture. Use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.</p> |
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| Conditions for safe storage, including any incompatibilities | Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. |
| | Incompatible Products: Strong acids. Strong oxidizing agents. Strong bases. |

Section 8 – Exposure controls, Personal Protection

Control parameters

Exposure Guidelines

| Exposure Guidelines | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-----------------------------|-----------|----------|------------|
| No information is available | --- | --- | --- |
| No information is available | --- | --- | --- |
| No information is available | --- | --- | --- |
| No information is available | --- | --- | --- |

*ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value
 OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits
 NIOSH IDLH
 Immediately Dangerous to Life or Health

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962

(11th Cir., 1992) See section 15 for national exposure control parameters

| | |
|--|--|
| Appropriate engineering controls | Engineering Measures: Showers Eyewash stations Ventilation systems. |
| Individual protection measures, such as personal protective equipment | Eye/Face Protection: If splashes are likely to occur: Wear safety glasses with side shields (or goggles). None required for consumer use. Skin and Body Protection: Wear protective gloves and protective clothing. Long sleeved clothing. Impervious gloves. Respiratory Protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. |

Section 9 – Physical and Chemical Properties

| | | |
|-----------------------------|---|------------------------|
| Physical Properties | Physical | |
| | Appearance: Various | |
| | Odor: No odor | |
| | Physical | |
| | Odor Threshold: No information available. | |
| Chemical Properties: | | |
| Property | Values | Remarks/ Method |



| | | |
|---|-------------------|------------|
| pH | No data available | None known |
| Melting / freezing point | No data available | None known |
| Boiling point / boiling range | No data available | None known |
| Flash Point | No data available | None known |
| Evaporation Rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | No data available | None known |
| Upper flammability limit | No data available | None known |
| Lower flammability limit | No data available | None known |
| Vapor pressure | No data available | None known |
| Vapor density | No data available | None known |
| Specific Gravity | No data available | None known |
| Water Solubility | No data available | None known |
| Solubility in other solvents | No data available | None known |
| Partition coefficient: n-octanol/water | 0.0001 | None known |
| Autoignition temperature | 130°C | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | 0.0001 | None known |
| Explosive properties | No data available | None known |
| Oxidizing Properties | No data available | None known |

Other Information

| | |
|-----------------------------------|-------------------|
| Softening Point | No data available |
| VOC Content (%) | No data available |
| Particle Size | No data available |
| Particle Size Distribution | No data available |

Section 10 – Stability and Reactivity

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|--|--|
| Reactivity: | No data is available |
| Chemical stability: | Stable under recommended storage condition |
| Possibility of Hazardous Reactions: | None under normal processing. |
| Hazardous Polymerization: | Hazardous polymerization does not occur. |
| Conditions to avoid: | None known based on information supplied. |
| Incompatible materials | Strong acids. Strong oxidizing agents. Strong bases. |
| Hazardous Decomposition Products: | Carbon oxides. |

Section 11 – Toxicological Information

Information on likely routes of exposure

| | |
|----------------------------|---|
| Product Information | Product does not present an acute toxicity hazard based on known or supplied information. In case of rupture:. |
| Inhalation | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. |
| Eye Contact | Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. Irritating to eyes. May cause redness, itching, and pain. May cause temporary eye irritation. |
| Skin Contact | Specific test data for the substance or mixture is not available. |



| | |
|------------------|---|
| | Expected to be an irritant based on components. Irritating to skin. Prolonged contact may cause redness and irritation. |
| Ingestion | Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |

Component Information

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|---|--|
| Information on toxicological effects | Symptoms: Erythema (skin redness). May cause redness and tearing of the eyes. Itching. Rashes. Hives. |
| Delayed and immediate effects as well as chronic effects from short and long-term exposure | Sensitization: May cause sensitization of susceptible persons. May cause sensitization by skin contact. Mutagenic Effects: No information available. Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen |

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|-----------------------------|-------|------|-----|------|
| No information is available | --- | --- | --- | --- |
| No information is available | --- | --- | --- | --- |

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

| | |
|---------------------------------|---|
| Reproductive Toxicity | No information available. |
| STOT - single exposure | No information available. |
| STOT - repeated exposure | Causes damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE). |
| Chronic Toxicity | Contains a known or suspected carcinogen. Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause adverse liver effects. |
| Target Organ Effects | Respiratory system. Eyes. Skin. Gastrointestinal tract (GI). Central Vascular System (CVS).Kidney. Liver. Lungs. Heart. |
| Aspiration Hazard | No information available. |

Numerical measures of toxicity Product Information

| | |
|--|--|
| The values which are on the right are calculated based on chapter 3.1 of the GHS document. | ATEmix (oral): X ATEmix (dermal): X |
|--|--|



Section 12 – Ecological Information

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

| Chemical Name | Toxicity to Algae | Toxicity to Fish | Toxicity to Microorganisms | Daphnia Magna (Water Flea) |
|-----------------------------|-------------------|------------------|----------------------------|----------------------------|
| No information is available | --- | --- | --- | --- |

| | |
|--------------------------------------|---------------------------|
| Persistence and Degradability | No information available. |
| Bioaccumulation | No information available. |
| Other adverse effects | No information available. |

Section 13 – Disposal Considerations

Waste treatment methods

Disposal methods: This material, as supplied, is not a hazardous waste according to Federal regulations (40CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging: Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141

This product contains one or more substances that are listed with the State of California as a hazardous waste.

| Chemical Name | California Hazardous Waste |
|-----------------------------|----------------------------|
| No information is available | --- |
| No information is available | --- |
| No information is available | --- |
| No information is available | --- |

Section 14 - Transport information

The Alkaline battery as stated in Appendix are made in compliance to the requirements stated in the latest edition of the IATA Dangerous Goods Regulations Packing Instruction 965 section II such that they can be transported as a NOT RESTRICTED (non-hazardous/non-dangerous) goods. However, if those Li-Ion batteries are packed with or contained in an equipment, then it is the responsibility of the shipper to ensure that the consignment are packed in compliance to the latest edition of the IATA Dangerous Goods Regulations section of either Packing Instruction 966 or 967. II. With regard to transport, the following regulations are cited and considered:

- The International Civil Aviation Organization (ICAO) Technical Instructions, Packing instruction 965 or 966 or 967, section II (2021-2022 Edition).
- The International Air transport Association (IATA) Dangerous Goods Regulations, Packing instruction 965 or 966 or 967, section II (63th Edition, 2022).
- Special provision 188 of the International Maritime Dangerous Goods (IMDG) Code(Amendment 40-20 Edition).



- The US Hazardous Materials Regulation 49 CFR (Code of Federal Regulations), sections 173-185 Lithium batteries and cells.

- The UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria 38.3 Lithium batteries, Rev.7

These products are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to all the applicable international and national governmental regulations, not limited to the above mentioned. We further certify that the enclosed products have been tested and fulfilled the requirements and conditions in accordance with UN Recommendations (T1 – T8) on the Transport of Dangerous Goods Model Regulations and the Manual of Tests and Criteria.

Test results of the UN Recommendation on the Transport of Dangerous Goods

| Manual of Test and Criteria (38.3 Lithium battery) | | | |
|--|------------------------|--------------|--------|
| No. | Test items | Test results | Remark |
| T1 | Altitude simulation | Pass | --- |
| T2 | Thermal test | Pass | --- |
| T3 | Vibration | Pass | --- |
| T4 | Shock | Pass | --- |
| T5 | External short circuit | Pass | --- |
| T6 | Impact / Crush | Pass | --- |
| T7 | Overcharge | Pass | --- |
| T8 | Forced discharge | Pass | --- |

Section 15 – Regulatory Information

International Inventories

TSCA: Complies

DSL: All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name | CAS No | Weight-% | SARA 313 – Threshold Values % |
|-----------------------------|--------|----------|-------------------------------|
| No information is available | --- | --- | --- |
| No information is available | --- | --- | --- |
| No information is available | --- | --- | --- |
| No information is available | --- | --- | --- |

SARA 311/312 Hazard Categories

| | |
|--|----|
| Acute Health Hazard | No |
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| X No information is available | --- | --- | --- | --- |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical Name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | RQ |
|-----------------------------|--------------------------|------------------------------------|-----|
| No information is available | --- | --- | --- |
| No information is available | --- | --- | --- |

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals.

| Chemical Name | California Proposition 65 |
|-----------------------------|---------------------------|
| No information is available | --- |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania | Rhode Island | Illinois |
|-----------------------------|------------|---------------|--------------|--------------|----------|
| No information is available | --- | --- | --- | --- | --- |
| No information is available | --- | --- | --- | --- | --- |
| No information is available | --- | --- | --- | --- | --- |
| No information is available | --- | --- | --- | --- | --- |
| No information is available | --- | --- | --- | --- | --- |
| No information is available | --- | --- | --- | --- | --- |

International Regulations**Mexico****National occupational exposure limits**

| Component | Carcinogen Status | Exposure Limits |
|-----------------------------|-------------------|-----------------|
| No information is available | --- | --- |
| No information is available | --- | --- |

Mexico - Occupational Exposure Limits - Carcinogens

Canada**WHMIS Hazard Class**

Non-controlled

**Section 16 – Additional Information**

| | | | | |
|-------------|-------------------------|-----------------------|------------------------------|--|
| NFPA | Health Hazards 1 | Flammability 0 | Instability 0 | Physical and Chemical Hazards - Personal Protection X |
| HMIS | Health Hazards 0 | Flammability 0 | Physical Hazard 0 | |

Revision Date: X

Revision Note: No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

===== End of Report =====

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